Veterans Health Administration
Office of Care Coordination
Strategic Plan FY 2005 – 2009

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Introduction

Care Coordination in VHA involves the implementation of processes to veteran patient's health care that extend the principles of care and case management using health informatics, disease management and telehealth technologies. These technologies facilitate access to care and enhance the health of designated individuals and populations. Care Coordination processes are being implemented in VHA with the specific aim of providing the right care in the right place at the right time for veteran patients. VHA's focus on coordinating care is intended to align its services with Institute of Medicine[1] (IOM) recommendations. VHA is thereby building upon health informatics foundations laid over the past 10 years, ones that the IOM has recognized in citing the leadership[2] role VHA plays in the areas of clinical performance improvement, performance measurement, information technologies, health services research and patient safety. Health informatics, telehealth and disease management are all emerging technologies. Systematically implementing these technologies throughout the continuum of care is a major undertaking for VHA, one that must be associated with evidence of clinical and cost effectiveness.

Introducing the people and technologies required to coordinate care is associated with appreciable overhead costs and can only be justified if the associated interventions address significant health needs of veteran patients. The demographics of the veteran population are changing and parallel the relative health needs of the general population in which:

- Mortality rates are decreasing by 1% per annum
- Nursing home utilization rates are reducing by 0.7% per annum
- Disability rates are decreasing by 2.2% per annum
- Over 65's are increasing by 1.5% per annum
- Over 85's are increasing by 2.2% per annum
- 2% of patients are 20-30% of health care costs
- Patients with multiple diseases needs/care are mismatched
- Patients care needs are not coordinated

These demographic and disease profiles with their changing incidence and prevalence of chronic diseases has influenced VHA's initial emphasis for the implementation of care coordination.

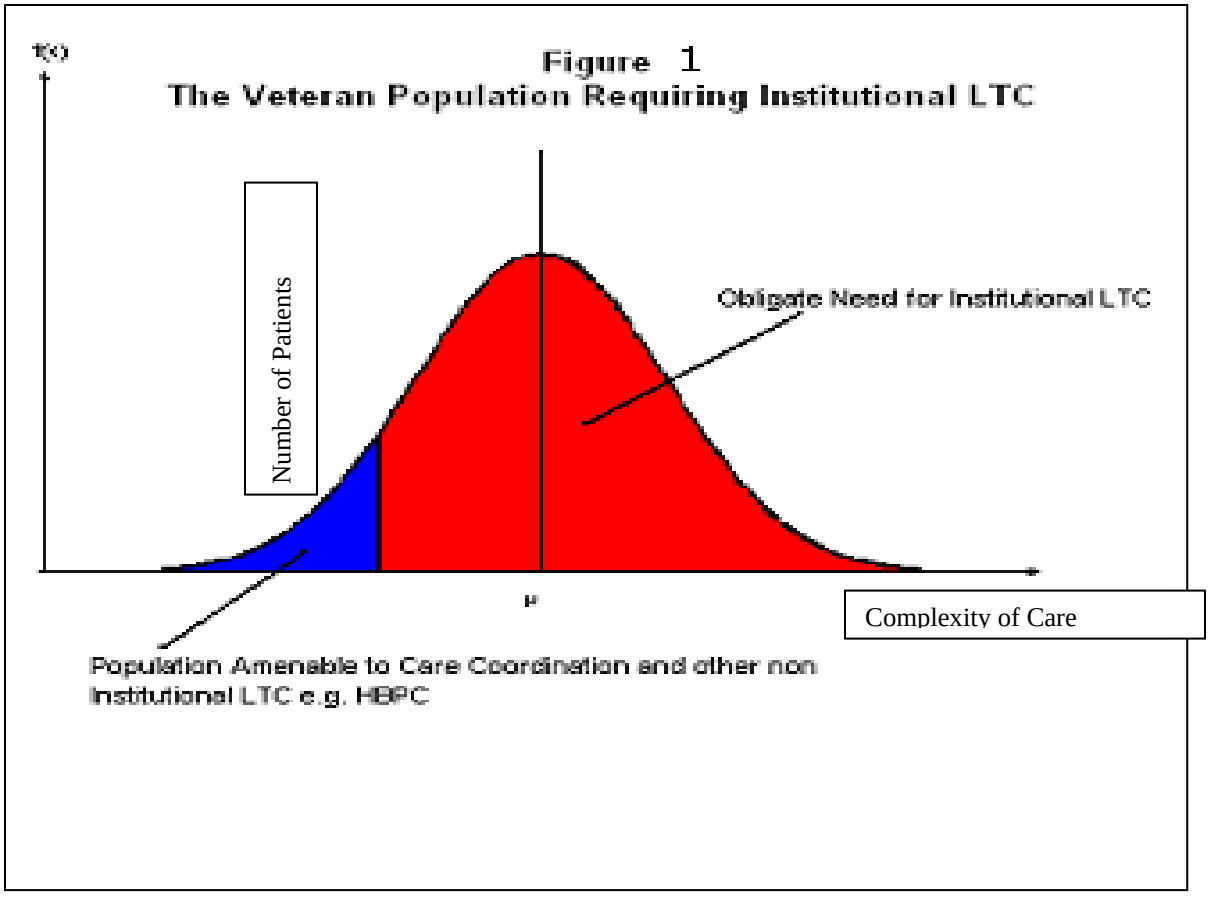
VHA's initial care coordination model is:

- Focusing on patients with chronic diseases (e.g. diabetes, chronic heart failure, post-traumatic stress disorder, depression and chronic respiratory disease)
- Making home the preferred place of care for veteran patients, when appropriate
- Focusing on the 2% of patients whose treatment incurs 20-30% of health care costs

[1] *Institute of Medicine Priority Areas for National Action: Transforming Health Care Quality*
[2] Institute of Medicine's "*Leadership by Example*

- Providing non-institutional care support for veteran patients
- Assisting veteran patients to self-manage their disease or recovery form disease, when this is possible

Because of these characteristics, VHA's initial model of care coordination is called Care Coordination Home Telehealth (CCHT). CCHT is an important element in VHA's care delivery armamentarium to meet targets for the non-institutional care of veteran patients. These are typically patients with complex care needs. The CCHT initiative is, therefore, closely associated with VHA's strategy for the long-term care needs of veteran patients, and VHA established an Office of Care Coordination (OCC) to work in close collaboration with the Geriatrics and Extended Care Strategic Healthcare Group to implement this program. Operational experience with Care Coordination suggest this schematically represents in Figure 1 16% of long-term institutional care patients who, if offered the choice to do so, can live independently with the requisite care support in the community from programs such as home-based primary care (HBPC) and CCHT.



The Veteran Population Requiring Institutional LTC (VISN 8 CCCS Data)

Elderly patients with complex conditions have care needs that cross the continuum of care and often have obligate reasons why they have to be placed in long-term institutional care (e.g., incontinence and dementia). VHA's implementation of CCHT is designed to support those veteran patients who express a preference to remain in their

homes and for whom it is appropriate, effective and cost-effective to use this modality of care to prevent/delay the necessity to enter a long-term institutional care facility. VHA's patient enrollment targets for CCHT are:

- October 2004 8,000 patients enrolled
- October 2005 21,000-31,500 patients enrolled (depending on budget)
- October 2006 42,000 patients enrolled (depending on budget)
- October 2007 55,000 patients enrolled (depending on budget)
- October 2008 75,000 patients enrolled (depending on budget)
- October 2009 100,000 patients enrolled (depending on budget)
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CCHT can, therefore, provide a "glide path" for veteran patients with chronic care needs who can self-manage their care, and by linking with a care coordinator, can negotiate their way across the continuum of care. CCHT is therefore akin to an "air traffic control system" in that it can direct patients to the appropriate point in the continuum of care to meet their immediate needs and expedite access to care. Through ongoing assessments of functional status in patients receiving care through CCHT, it should be possible to improve predictions on the numbers of these patients that will require long-term institutional care. In assessing the health needs of patients with complex care needs on an ongoing basis, CCHT can help ensure these patients can receive the right care in the right place at the right time and can prevent them from getting "lost" within the complexity of the health care system. OCC has been tasked to create the clinical, training, technical, business and managerial infrastructure for implementing CCHT safely, effectively and cost-effectively, enabling VHA to meet its non-institutional care targets.

In addition to CCHT, OCC is helping to develop other areas of Care Coordination that draw on resources involving general telehealth, health informatics, and disease management. These include:

- Tele-retinal imaging to assess veterans with diabetes for diabetic retinopathy
- Tele-mental Health
- Tele-rehabilitation
- Tele-dermatology
- Tele-surgery

This strategy document details VHA's CCHT development in sections that relate to:

- Clinical and Quality Aspects of CCHT
- Training and Education Aspects of CCHT
- Technology Infrastructure Aspects of CCHT
- Management and Business Aspects of CCHT
- Research and Development Aspects of CCHT

OCC is also working with other Offices in VHA to leverage existing expertise (e.g. for clinical guidelines, quality measurement, training & education, research & development and equipment distribution). This strategic document received input from staff involved in care coordination at the facility, VISN and VA Central Office level and was based upon a strategic planning meeting held in Washington DC in July 2004 that involved the

staff listed in Appendix 1. These sections to follow are the results and recommendations of working groups.

OCC Strategy for CCHT Clinical and Quality FY 2005-2009

VHA is introducing CCHT in a standardized fashion. CCHT involves the use of disease management dialogues. These have been purchased by VHA from outside vendors and adhere to the associated VA clinical practice guidelines. CCHT is being implemented in each VISN in a standardized manner using an orientation package. The benefits to patients and VHA of such standardization are:

- Improving patient safety
- Reducing unnecessary clinical practice variation
- Facilitating accurate outcomes measurement
- Addressing potential medico-legal considerations
- Developing rationally the technical infrastructure to support CCHT

OCC staff support the implementation of these standardized models of clinical practice in CCHT programs by:

- Ongoing refinement of the definitions of Care Coordination, as required
- Assessing Systematically VISN CCHT programs to grant “Conditions of Participation” that attest to CCHT having been implemented in the required fashion
- Working jointly with VHA’s Office of Quality and Performance (OQP) on quality measures to monitor the CCHT rollout
- Maintaining a liaison with OQP and with the Joint Commission for the Accreditation of Health Care Organizations (JCAHO) to ensure CCHT is embedded into care in ways that harmonize with existing accreditation processes for care
- Linking with the Prosthetics and Sensory Aids Strategic Healthcare Group and Biomedical Engineering to update the “Clinical Practice Recommendations” that define the processes necessary to order, install, refurbish and recalibrate technologies used in CCHT within VHA, as necessary.

OCC provides regular support to designated CCHT leads in every VISN. These VISN leads are actively involved in the implementation of CCHT. This group was involved in the development of this strategy document and participates in regular 2-weekly telephone conference calls. The OCC clinical staff who support the CCHT initiative are 50% appointed to VACO and 50% appointed at the VISN. Their VISN/facility responsibilities are directly related to CCHT. The CCHT quality managers have this split VISN/VACO employment and are responsible for assessing the Conditions of Participation. In addition they each have specialist areas of interest that include care management, advanced clinic access, mental health and caregiver issues.

Table 1 provides OCC’s strategic priorities for CCHT Clinical and Quality Process Development from FY 2005-2009.

Table 1. CCHT Strategy for Clinical and Quality Process Development

Goal: To provide guidance and staff support in the implementation of CCHT standardized models of clinical practice in CCHT programs and an internal review system across the VA healthcare system to ensure program effectiveness and patient safety.

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
1. Develop Clinical Inventories of VHA Care Coordination Programs 2006	Each Network is required to enroll 1000 patients by the end of the first year of funding. During the FY 05 year, Networks are building programs and defining the best practices for their Network. This includes looking at clinical need and outcomes from proposed populations for enrollment.	1. Establish national inventory of programs from each Network. 2. Standardize enrollment criteria for populations of veterans enrolled in CCHT programs.	1. 10/1/05 2. 10/1/05
2. Design a VHA Disease Management Strategy	Clinical management of chronic disease usually focuses on symptomatic responses and patient education. Seldom is there a standard mechanism for inclusion of behaviors and patient response. The home as a site of care and treatment is not usually included in practice recommendations. The majority of Disease Management is focused on medical model needs. The key strategic initiative here is to develop a mechanism and communication plan to make chronic disease management centered on veteran need. Tools for communication will be dialogues and standard communication streams using home Telehealth technologies and related informatics (Health *e*Vet)	1. Define a patient centered Disease Management strategy that is interdisciplinary and includes the home as part of the continuum of care. 2. Establish mechanism for ensuring all national dialogues meet VHA Clinical Practice Guidelines. 3. Evaluate criteria and standards for dialogue development 4. Establish quality improvement process defining appropriate data elements, measure and evaluate.	1. 2/1/06 2. 2/1/05 3. 2/1/05 4. 2/1/05

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
3. Integrate CCHT data sets into VHA Informatics and Quality systems	As veterans are enrolled into CCHT programs across the system, any data collected on these patients must be incorporated into sets used to make decisions about clinical care within VHA. While the data that local programs may collect is impressive, it is not well communicated through national systems. In addition, there is little information available on the many veterans with chronic disease that remain in community living situations. Caregivers of veterans with complex, chronic diseases are partners with the healthcare system in assuring appropriate care. Their needs and issues are not addressed in a systematic manner. It is imperative to assure that we have national data streams that can communicate not only veteran statistics but define clinical needs as well.	1. Define national data elements to be collected. 2. Develop EPRP/SHEP mechanism for data collection and reporting. 3. Develop quality of life measurements for caregivers.	1. 2/05 2. 2/05 3. 2006
4. Establish a process for national program rollout	With the development of a national inventory during the 05 Fiscal year, a critical review of programs across the country will be available. Standards for programs can be reviewed to determine the key elements necessary to define national program elements. Using information collected during EPRP, clinical outcomes can be evaluated	1. Utilize national inventory and EPRP results to determine which CCHT programs need national sanction. 2. Develop standard admission and discharge criteria. 3. Identify populations that can benefit the most from CCHT as a	1. 2006 2. 2006 3 .2009

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
4. Establish a process for national program rollout	to match the VHA Practice guidelines. The progress and development of care coordination programs will strengthen the development of guidelines for veterans with multiple co-morbidities.	national initiative. 4. Deploy CCHT programs that are evidence based. 5. Deploy best practice CCHT programs to each Network that are evidence based.	 4. 2009 5. 2009
5. Develop accreditation standards for CCHT programs.	At the inception of the program, to assure that the appropriate clinical processes were developed as CCHT rolled out in each Network. An internal review system has been established to assist Networks with implementing programs and developing operating standards. As the programs mature and integrate into the standard clinical care, the safety and quality of care must be assured. Accreditation is a mechanism to review established programs beyond the minimum implementation criteria. Accreditation also facilitates moving the CCHT level of care from novelty to standard practice. Through partnership with national accrediting agencies, industry standards of practice and care can be developed.	1. Refine existing Conditions of Participation to provide ongoing clinical oversight to the programs. 2. Develop internal accreditation crosswalk to: a. assist in survey readiness b. standardize competencies. 3. Develop national criteria for external accreditation.	1. 2005 2. 2005 3. 2009

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
6. Link CCHT with Advanced Clinic Access to expedite clinic visits and specialist referrals for CCHT patients.	CCHT links patients in the home environment with care coordinators using technology. The management and referral of these patients across the continuum of care involves the personal knowledge of care coordinators, clinic lists/details and input from primary care physicians. Advanced Clinic Access (ACA) is a program that facilitates and expedites the referral of patients to clinics and specialist care. There is a natural synergy between CCHT and ACA and the 2 programs wish to collaborate and build this synergy. OCC has a quality manager with a special interest in ACA.	1. Develop a model whereby CCHT and ACA are interfaced in mental health. 2. Implement and evaluate this model 3. Disseminate this model in VHA 4. Create other models of CCHT/ACA in diabetes and congestive heart failure.	1. 2005 2. 2005 3.2006 4. 2006

OCC Strategy for CCHT Training and Education FY 2005-2009

VHA has an ambitious target to expand CCHT to the following numbers of veterans:

- October 2004 8,000 patients enrolled
- October 2005 21,000-31,500 patients enrolled (depending on budget)
- October 2006 42,000 patients enrolled (depending on budget)
- October 2007 55,000 patients enrolled (depending on budget)
- October 2008 75,000 patients enrolled (depending on budget)
- October 2009 100,000 patients enrolled (depending on budget)

Given VHA's commitment to implement CCHT in a standardized manner it is necessary to ensure that care coordinators, managers and other staff throughout VHA receive initial training and education and continuing education to meet these goals. Because the technologies and clinical practice VHA is employing for CCHT are at the leading edge of health care development, education materials are being created in-house with input involving expertise from within affiliated academic institutions.

OCC is providing these educational resources in partnership with VHA's Employee Education System (EES). Traditionally, such education materials have been slow to disseminate across the health care system. In its expectation that veteran patients will receive the right care in the right place at the right time, OCC and EES are developing new media-based training resources that ensure the training and education resources that are being developed for CCHT are available to the appropriate staff in a just-in-time manner. EES manages and supports a knowledge network that makes educational material available as real-time video to the PCs of staff throughout VHA and supports this just-in-time approach to training and education.

In 2004, the first of 4 Care Coordination training centers became operational in VHA. This training center is a virtual center that is a partnership between the Sunshine Training Center in Lake City, Florida in VISN 8 and a sister site in West Haven, CT in VISN 1. The Sunshine Training Center is responsible for curriculum development, coordinating the development of training resources and creating multi-media training resources in conjunction with EES. West Haven, CT is responsible for developing Web-based resources to support CCHT training, education and EES ensures these receive the appropriate Continuing Education recognition. OCC plans to develop 2 new training centers to support this initial center. One center will be for patient education/rural telehealth and the other general telehealth/health informatics.

OCC and EES support two major Care Coordination conferences each year. The first in the spring involves Care Coordination/Telehealth Leadership Forum and its participants are typically VHA professional/managerial/technical staff and other professional/managerial/technical staff from federal partners. The other OCC conference is the Caregiver Conference in the fall and is aimed at exploring the issues related to the caregiver in the home who is a vital partner in the successful provision of care to a veteran patient that is supported by CCHT.

The traditional approach to conferences in healthcare is to accept the importance of face-to-face interaction as self-evident. A successful conference is recognized as successful from the numbers of attendees and the positive feedback on evaluations. OCC is embarking on a strategy with EES whereby future success will be judged on its ability to deliver just-in-time education to staff in facilities and CBOC's using multi-media technologies. We anticipate that less staff will need to travel to large infrequent conferences and that education will be much more frequent and targeted with interactions based upon distance education mediated by new and emerging technologies.

Table 2 provides OCC's strategic priorities for staff training and education in Care Coordination for FY 2005-2009.

Table 2. OCC Education and Training Strategy FY 2005-2009

GOAL: **To provide a clear outline of the strategic direction OCC should take in the Education and Training area as it relates to CCHT.**

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
1. Review and discuss existing training program for CCHT within the training center and identify opportunities	1. Access to distance learning methodologies (VAKN/CDN-desktop)	1. EES/STC to identify pilot CCHT VISN for CCHT desktop education & training	December 2004 Moderate
	2. Knowledge deficits exist about available resources: -communication flow	1. STC/EES to provide education on availability of technologies and identify barriers that prevent use 2. STC/EES to work with field educators in the VA Educators Integrated Network (VEIN) to open lines of communication	October 2004 Moderate September 2004 Moderate
	3. Having adequate marketing of training and education resources	1. STC staff to utilize newsflash section of OCC website for information sharing 2. OCC/EES/STC To explore **Collage-**a knowledge management tool as a compliment to OCC website for information sharing and education	September 2004 High October 2004 High

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
1. Review and discuss existing training program for CCHT within the training center and identify opportunities	3. Having adequate marketing of training and education resources	3. STC staff to identify quarterly VA staff completing web-based training and sending this information to VISN leads for information and follow-up 4. Reinforcement of mandatory education of web-based content to meet Conditions of Participation through collaboration with OCC quality managers and VISN leads for CCHT.	August 2004 High August 2004 High
	4. Enhance understanding of business processes for a sustainable CCHT program	STC/EES to develop an education program for those individuals who provide business/administrative leadership and support to develop expertise and champions in this area to ensure viability and sustainability of CCHT programs.	December 2004 High
	5. Integration of care coordination into existing VA infrastructure and patient care programs	STC/EES to identify other educational products and programs to collaborate with to improve delivery of care to veterans	January 2005 High
	6. Clarify the role of the CCHT Training Advisory Group in relation to the current and upcoming training centers and educational program plan	OCC to identify specific outcomes that CCHT Advisory Group will need to meet for OCC strategic plan	September 2004 High

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
1. Review and discuss existing training program for CCHT within the training center and identify opportunities	7. Clarification of partnership between EES and training centers	1. OCC to identify specific outcomes and processes that this partnership will need to meet for OCC strategic plan 2. CCHT Training Advisory Group to determine recommendations regarding EES/Training centers collaboration and present to OCC	October 2004 Moderate December 2004 Moderate
	8. Facilitate disease specific care certification process for CCHT Networks	1. STC/EES to continue collaboration with DoD (Walter Reed) for identifying successful applications to meet JCAHO requirements -Provide web-based training -Provide training on completion of application packet -Collaborate with OCC clinical processes team to determine certification diagnoses	September 2005 Moderate
	9. Training centers need to be flexible and responsive to provide just-in-time training on educational needs as they arise -Advance Clinical Access -VHA 12 for 12 Goals -Telecare -Coding Flashcards -Patient Safety	CCHT Advisory Group should review emerging topics for educational initiatives bi-annually and communicate this to training centers and other resources	Begin September 2004 Moderate

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
2. Workforce issues and areas for improvement	1. Have a robust system for competency development and certification of CCHT staff	1. STC staff to develop more specific competency tools that include the web-based training for varying disciplines and levels of staff and have available on the OCC website under training and education 2. CCHT staff will receive the UF academic certificate after they have completed the core curriculum and hands-on training in CCHT	September 2004 High Certificate ready now Moderate
	2. Potential recruitment and retention issues related to specific disciplines providing care coordination	1. STC/EES to review results from VA national staff satisfaction survey to determine common areas of satisfaction and dissatisfaction to see what is needed to develop a survey tool for CCHT staff to identify role perceptions then share these results with VISN leads 2. STC/EES explore care coordination certification with an external accrediting body 3. Collaborate with groups to include care coordination certification into professional boards (i.e. NPSB) 4. STC/EES will develop question pool for inclusion in PBI for care coordinators	January 2005 Moderate Begin October 2004 Moderate Begin October 2004 Moderate August 2004 Moderate

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
2. Workforce issues and areas for improvement	3. Need to expand training resources nationally to provide just-in-time training	1. STC to develop Master Preceptor Program -2-day on-site training -Help identify field staff educational needs 2. STC will collaborate with quality managers to identify practice benchmarks in care areas such as CHF, mental health etc. to serve as mentors.	September 2005 Moderate September 2005 Moderate
	4. Explore options for long-term sustainability and need for training centers	1. OCC to review funding options and plan for long-term need for training for all training centers	January 2005 High
3. Develop a training evaluation process	1. Incorporate education and training into CCHT program evaluation -Identify value of education -Identify opportunities for refinement and improvement of educational activities	1. EES/STC staff to complete a level 4 or 5 ROI (return on investment) evaluation process. This means the impact on CCHT program investment can be determined for the impact of training efforts -STC staff attended ROI training in May 2004 2. EES/STC staff work with Carol Craft to design a level 3 evaluation (application of learning) to be performed after each learner completes the final course in the required core curriculum.	September 2005 Moderate-High October 2004 High

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
3. Develop a training evaluation process	1. Incorporate education and training into CCHT program evaluation -Identify value of education -Identify opportunities for refinement and improvement of educational activities	3. STC will do a level 2 evaluation (knowledge acquisition) after any face-to-face training provided 4. STC will do a level 3 evaluation 30 days post face-to-face training via email for all staff directly delivering care coordination and home Telehealth services. 5. EES/STC will keep track quarterly of total numbers of staff completing the web-based courses, which VISNs they are from and what disciplines they come from. 6. Training center staff will prepare an annual report to the OCC to be incorporated into the education strategy and curriculum as appropriate. OCC staff to determine required elements for report.	Already available High September 2004 High Already available High January 2005 Moderate-High

OCC Information Technology Strategy 2005-2009

CCHT provides veteran patients who have complex care needs with state of the art care supported by health informatics, telehealth and disease management technologies. CCHT thereby enables these patients to live independently at home, self-manage their care and avoid inappropriate and unnecessary admission to acute care to long-term institutional care. Achieving this has required VHA develop the robust, sustainable and fail-safe national information technology (IT) architecture necessary to support CCHT.

This IT architecture has had to be fail-safe and incorporates the required back-up and redundancy processes to maintain the remote healthcare environment. VHA is an acknowledged leader in health informatics and the development of the computerized health record. VHA needs to work with the vendor community in the emerging technology sector of home telehealth and in collaboration with them evolve the necessary technologies in the home to expand the use of CCHT and provide patient information along with access to the patient held record as well as the currently established processes of vital sign monitoring in the home. There are no current standards within the home telehealth community for the transfer of these vital sign data. VHA must have a standardized and interoperable network and has introduced HL-7 standards into its national home telehealth technology contract in FY04.

Patient data from the home are currently accessible to clinicians through a variety of vendor specific data views. It is imperative that VHA brings these patient data into its computerized patient health system (CPRS). These data must be presented in a way that are user-friendly to clinicians and suitably presented to enable rapid and appropriate clinical decision making. The design of these clinical decision-making systems requires the input of interdisciplinary groups of clinicians.

A major component of CCHT is the use of disease management dialogues to support patients with chronic diseases. There is currently no accepted schema for the standardization of these data and currently no structure within which they can be captured and presented in a common view for clinicians to act upon. Once the more immediate and straightforward task of incorporating HL-7 vital sign data onto CPRS has been accomplished, these data must be interfaced also.

OCC's strategy is that CCHT will link into VHA's enterprise IT architecture. The training of staff in the use of CCHT systems is planned to be part of routine CPRS training at the facility level with respect to the clinician dashboard with specialist training on the use of home telehealth devices available separately.

Increasingly, veteran patients are choosing alternative modes of telecommunications aside from the familiar plain old telephone system (POTS). As a result VHA has to consider that alterative means of connectivity (e.g. cable, wireless and satellite) may be required in the future to connect with veterans in their homes. Figure 3 provides the VHA vision for the interim national home telehealth infrastructure and Figure 4 the long-term integrated architecture that will be part of CPRS.

OCC is working with VHA's CIO's Office of Special Projects in Silver Spring to realize this new IT system to support veteran patient care in the home.

Table 3 provides OCC's information technology strategy for FY 2005-2009

To View Figure 3 Care Coordination Interim Infrastructure click here

To view Figure 4 Home Telehealth Phase 2A HDR click here.

Table 3. OCC Information Technology Strategy FY 2005-2009

GOAL: **To provide a clear outline of the strategic direction OCC should take in the Developing its national IT architecture.**

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
1. Implement Infrastructure to support vendors who receive awards under the RFP	1. Establish vendor implementation as top priority for OI HTH IT group 2. Request appropriate funding to support the effort 3. Legacy vendor servers to be installed behind VA firewall 4. Ensure all vendors on the national CCHT contracts have servers behind VA firewall and back up and redundancy at mirror site	1. Ensure all server requirements and cyber security needs are addressed 2. Work with vendors as per national contract and vendors have Backup and redundancy in place within 45 days of contract award.	December 2004* High * Date is dependent on contract award dates February 2005* High * Date is dependent on contract award dates
2. VA to take leadership role in driving HTH technology development	1. Work with VISN Groups to monitor current technology performance. 2. Work with R&D process to delineate emerging technology developments.	1. Establish development national dollars for supporting prototypes 2. Encourage collaboration with vendors and set up structure 3. Work with vendors to establish generic/modular HTH standards 4. Work with R+D Group and Clinical Group 5. Have OCC establish process for evaluating emerging HTH technologies. Include VACO Make/Buy workgroup and others	October 2005 Medium

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
3. Ensure Home CCHT needs are included in My HealtheVet plans	Establish cross-cutting groups to incorporate CCHT into project plans for My Health eVet.	1. Establish Clinically Relevant Moderated Discussion prototype. 2. Establish a prototype to investigate delivery of home Telehealth in home messaging dialogue services through the web 3. Investigate VA's ability to recycle old VA computers to be given to veterans 4. Establish prototype for secure messaging	October 2006 Medium
4. Ensure CCHT Vital sign data is incorporated into health data repository.	Convene HL7 registration workgroup and implement the resulting process	1. Identify interested members 2. Convene workgroup in early Fall	September 2004 High
5. Enable Care Coordinators and Primary Care Providers to view CCHT data on CPRS	Develop and implement nationally appropriate views of Home Telehealth data for Care Coordinators and Healthcare Providers	1. OCC must Submit New Service Request 2. Have OCC recommend new members to be added to the CPRS workgroups 3. Work with OI to develop updated versions of CPRS for Care Providers 4. Work with OI to develop a version of Care Management Dashboard for Care Coordinators	1. Done 2. Fall 2004 3. July 2005 4. December 2006

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
6. Link CCHT data collection with appropriate national guidelines.	Establish a clinical workgroup to address CCHT data issues	1. Have clinical workgroup identify the additional data that they want stored 2. Establish rules for data standardization, retention and BLOBS 3. Have Clinical workgroup standardize dialogues and recommend how to present this data in a way that it would be useful to the clinical users.	March 2005 Medium
7. Perform needs assessment at VISN level for Potential CCHT enrollees.	Create systems to support the Telehealth business needs. System should assist in identification, monitoring, and tracking Home Telehealth patients and equipment. System needs to be accessible from Care Coordinator's desk top. A key component is that system needs to identify patient's that meet established enrollment criteria, such as high cost patients.	1. Work with Business group to define business rules 2. Review existing implementations including VISN 1 3. Work with others including Jack Bates, VISN 16, manager of Financial and Clinical Data Mart (FCDM)	Fall 2005 Medium
8. Ensure IT is incorporated into other elements of CCHT strategy.	Ensure that IT is covered in overall OCC communication strategy	Have training and clinical groups communicate existence of programs and tools, i.e. Care Management	March 2005 High

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
9. Ensure IT requirements support the business management of CCHT	1. Clarify the business rules that need to be supported by the Home Telehealth System, such as data access rights and responsibilities for mobile patients	1. Staff at the Preferred Facility can grant access to a Care Coordinator at another site. Vendors do track what facilities Care Coordinators are associated with 2. Product to be produced by Business group	March 2005 High
1. Ensure that Telecommunications assess is not a barrier to enrolling patients into CCHT	Identify alternative telecom strategies that might be useful in CCHT communications such as wireless, cable, satellite. This objective should consider POTS phone access, Internet access, Wireless voice (cell), Broadband access, Wireless data, Voice over IP, Video over IP, GPS	1. Ensure that all vendors' home devices will work with Cell phone technologies. 2. Ensure that all technologies can work with traveling veterans	March 2007

OCC Business Strategy FY 2005-2009

No matter how robust the clinical, training and technical infrastructure of CCHT, programs cannot be successful without the appropriate business infrastructure. In VISN 8, where CCHT was initially implemented the business model involved developing a service line. As CCHT has been adopted in other VISNs, a more variable approach to the business model has been required. In some VISNs, CCHT has been introduced as part of home-based primary care (HBPC) and in others as part of primary and ambulatory care clinics.

OCC has therefore taken a very flexible approach as to how CCHT can be implemented. As a result, it has been necessary to structure the attendant business support processes such as coding of workload and clinical activity and payment for services with this in mind.

In collaboration, with the ARC and DSS, OCC has worked to develop a set of codes that quantify CCHT activity. These codes require local DSS staff to use them appropriately to establish clinics. OCC has worked to ensure that accurate data are obtained from DSS as the basis for workload capture and payment for CCHT. Of particular importance to OCC is defining census in collaboration with Geriatrics and Extended Care.

CCHT is being initially implemented in VHA with the express intention of supporting veterans at risk of long-term institutional care in their own homes. In order to ensure the appropriate patient selection, OCC is implementing VHA's geriatric and extended care assessment tool (GEC) and plans to use the 3-monthly repeat of this assessment as the basis for measuring patient census and providing interim funding.

CCHT demonstrably helps support patients in their own homes and reduces unscheduled clinic visits, ER attendance and hospital admissions. This creates a potential problem in that VHA's funding system (VERA) recognizes activity as the basis for defining complex care patients. Although CCHT reduces the costs of health care there are technology and staffing costs that have to be met. If the reduced activity results in less funding for a facility/VISN, this is a disincentive to implementing CCHT.

The rationale for CCHT is clear in terms of savings, but realizing these savings takes some time as hospital and clinic-based service delivery systems are restructured. To facilitate this change management process, OCC is working with the ARC and VHA CFO's Office to devise an appropriate VERA allocation for CCHT.

A major component of implementing a new health care delivery process such as CCHT is marketing to staff and patients. It is vital that appropriate clinical champions are recognized and supported.
Table 4 provides OCC's Business Process Strategy for FY 2005-2009

Table 4. OCC Business Process Strategy FY 2005-2009

GOAL: **To provide a clear outline of the strategic direction OCC should take with regards to the Business area as it relates to CCHT.**

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
1. Review and discuss current CCHT coding structure and potential impact to the development of an allocation model for CCHT under VERA.	1. The recent change of making stop code 683 as a count clinic for the documentation of the daily monitoring activities using a non-video device 683 for every 5 days of monitoring, is still controversial with respect to the requirement of an encounter note weekly for every 5 days of monitoring. Impression is that it is too many notes are impossible to manage.	1. Documentation to be done monthly and a template to be created for these encounters.	September 2004 High
	2. Some Networks want to use both Option 1 and 2 as identified for coding. The benefit of one or the other or both is unknown.	1. Networks should have flexibility to implement Option 1, 2 or both. 2. The benefit of these options should be explored. 3. To change terminology of Option 1 from “Service Line” to Program. 4. Each Network to designate a coordinator or program manager to support and oversee the CCHT facility program across the network. (to develop functional statement)	November 2004 Moderate

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
1. Review and discuss current CCHT coding structure and potential impact to the development of a reimbursement model for CCHT.	3. The implementation of the stop codes for workload capture have been problematic because the lack of information and understanding from the local DSS & MAS coders regarding CCHT coding structure and the absence of a data validation process.	1. OCC will develop a quick reference document for the implementation of the clinic stop codes, which will include samples and spreadsheets. This document will be added to the Orientation Packet. 2. OCC will develop a process for data validation that informs about data sources, methods, schedules and reports. This document will also be added to the orientation packet.	October 2004 High November 2004 High
	4. The interim reimbursement model does not pick up equipment maintenance and replacement costs. Most CCHT activities are captured by secondary stop codes. Some existing program such as HBPC and MHICM currently capture reimbursement through the VERA allocation. A concern was raised that if a CCHT reimbursement category was created, it is unclear how CCHT expansion programs (such as HBPC and MHICM) VERA allocation would be affected	1. To present these issues to the CCHT Reimbursement Work Group in order for them to review the current coding structure, workload data and to identify the strength, threats and opportunities toward the development of a reimbursement model for CCHT.	November 2004 High Model Design December 2004 High

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
2. Describe “How” the expansion of CCHT should occur beyond non-institutional care.	1. There is a need for wireless technology and internet based applications to serve veterans with these resources and maximize access to VHA from work or remotely.	1. To explore the opportunities of wireless technology within the industry. 2. Expand CCHT for weight and pain management, smoking cessation clinics, education, prevention, caregiver support and other disease management.	Ongoing
	1. Although it is a of great benefit to use CCHT in ALF (Assisted Living Facilities), State veterans homes, nursing homes, etc., there are limitations specific to the in-home messaging device with regards to the customization of the dialogue for one patient instead of multi-patients access. 2. The device cannot be tracked by prosthetics if placed in these facilities because the box serial number is not patient specific; central stationed devices are to be tracked by SPC.	1. To define the logistics involved in the placement of a tech device at an ALF, etc., to be used by multiple veterans involving prosthetic and SPD equipment tracking systems. 2. To explore with vendors how this can be done with one device serving multiple patients.	November 2004 High December 2004 Moderate

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
3. Re-define marketing opportunities	Among the issues were identified patient non-compliance after using the technology, patient drop out, lack of buy in, attitude toward change/traditional care, misunderstanding of care coordination vs. case management, perception of more workload for providers, CCHT is not evidence based, equipment is expensive for investment and the return is unknown.	OCC to develop marketing plan and tools that considers, addresses and responds to the following: 1. VETERAN & CAREGIVER Strategy a. promote impact in quality of life. b. promote self management benefits c. use peer groups, VSO's d. expand education using group clinics --support e. tools: i. videos in waiting areas ii. brochures iii. ask for providers to recommend CCHT to patients.	February 2005 Moderate
		2. PROVIDER a. equipment demo and open houses b. share available data and clinical outcomes at other facilities using CCHT c. show impact on their workload d. statistics of waiting times and facility clinical needs based on population e. tools: i. 1-2 meetings ii. communicate to all providers iii. identify a champion provider that could promote among providers iv. use videos, meetings, and trainings with CME	February 2005 Moderate

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
3. Re-define marketing opportunities	Among the issues were identified patient non-compliance after using the technology, patient drop out, lack of buy in, attitude toward change/traditional care, misunderstanding of care coordination vs. case management, perception of more workload for providers, CCHT is not evidence based, equipment is expensive for investment and the return is unknown.	3. LEADERSHIP a. inform about performance monitors/measures regarding CCHT. b. impact of CCHT on waiting times and clinic access c. patient satisfaction outcomes d. good publicity benefits e. cost impact studies data f. impact of quality of life and health care g. Tools: i. 1-1 meetings Presentations ii. periodic status reports to HS council and clinical executive board.	February 2005 Moderate

OCC Research and Development Strategy FY 2005-2009

The initial implementation of CCHT in VHA has been pragmatic and based upon models of care that have been formulated to manage areas of major clinical need in VHA such as congestive heart failure, diabetes, depression, and post-traumatic stress disorder. VHA is now implementing these models of care in a very standardized manner in which the needs assessments, clinical practices, training, and information technology infrastructure are all very standardized.

Given the rapidly evolving nature of the technologies that are used in CCHT and changes in clinical practice, the “shelf life” of models of CCHT for particular disease entities is likely to be relatively short-lived. How these models of care for CCHT will be regularly updated is of fundamental importance to OCC, as is determining how new ones such as palliative care are developed.

In implementing CCHT, VHA has a unique opportunity to develop models of evidence-based practice and directly implement research findings into practice. One possible model to use in approaching this task is to establish a center or centers of excellence for care coordination in VHA. OCC and the Office of Research and Development (ORD) are disinclined to follow this approach and prefer that ORD develop a model that links with existing VHA research and development resources through the existing HSR&D and QUERI mechanisms.

OCC is proposing that a Research and Development Board for Care Coordination be developed that internally purchases the expertise in VHA for new models of CCHT and to update the existing ones. The process, as envisaged would be as follows:

1. The Research and Development Board for Care Coordination will identify new/updated care coordination models that need to be developed based on research priorities and service priorities (e.g., performance measures)
2. This Research and Development Board would assist in designing an RFP through the QUERI mechanism that might for example address a new model for an area they have prioritized; e.g.; diabetes or other area of care using CCHT
3. The eventual awardee is expected to define an evidence-based model of care and supplement the model with consensus/best practice if evidence is lacking. This model needs to include the clinical, training, technology and business components is then pilot tested and refined for VHA-wide implementation.
4. The new model is implemented nationally with the appropriate outcome measures.

Thus systematic models of care are introduced and if the appropriate IRB approvals are sought, the dialogue devices in the patient’s homes can be used for research (e.g. on patient symptoms, preferences and caregiver issues). As well as research based practice for a particular disease, this model of CCHT development lends itself to cross-cutting design across models; e.g., psycho-social issues and palliative care.

Table 5 provides OCC Research and Development Strategy for FY 2005-2009

Table 5 OCC Research and Development Strategy FY 2005-2009

GOAL: **To provide a clear outline of the strategic direction OCC should take with regards to future Research and Development needs to create future models of CCHT and assess current ones.**

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
1. Defining what structure should be used for R&D in CCHT? Should there be centers of excellence?	1. The current VHA models of centers of excellence are not designed to provide an environment for care coordination development; therefore, the current center of excellence program is not an appropriate model for CCHT to adopt	Research Board needs to develop recommendations on how ORD can pursue CCHT. Also, to use/create the research infrastructure to suit the needs of the research and operation agenda ideally this will tap into existing VHA resources such as QUERI, GRECC, MIRECC and PADRECC	March 2005 High
	2. There is the opportunity to create a "Board". (Research and Development Board for Care Coordination). This board could cut across traditional silos and encompass the clinical, research and implementation components.	1. The Board should establish the direction of VHA's CCHT research in cooperation with VA R&D national office staff to establish a research agenda. 2. The Board should be composed of researchers, program experts, clinicians, systems experts, methodologists and access disease experts on an ad hoc basis. 3. Board membership should include 5 clinicians, 5 researchers and the Chief Consultant for Care Coordination as the Board Chair.	December 2004 High

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
2. Describe "How" should R&D in CCHT be prioritized	The Research and Development Board for Care Coordination needs to work with the QUERI groups and bridge the research and the service delivery communities to push the implementation of research into practice.	1. To propose to the National Leadership Board that R&D initiatives in VHA are internally purchased according to scientific findings but also to help model care to meet performance measures. Consideration is given to establishing a CCHT patient registry—maybe as part of the research agenda, or QUERI initiative. 2. To propose to the NLB that the Research and Development Board for Care Coordination commission research from the HSR&D and QUERI groups and other VHA centers of excellence that: a. Define evidence-based models of practice b. Supplement evidence with best-practice or consensus, if required c. Pilot the new models including clinical, technology and business aspects d. Refine models for VHA-wide implementation e. A conceptual flaw exists, in terms of the supposition that there is a robust evidence base from which implementation experts ca n draw, or that providing guideline-concordant	Presentation to NLB of proposed model October 2004 High

Objective	Issue/Opportunity	Recommendation	Target Date/Priority
2. Describe “How” should R&D in CCHT be prioritized	The Research and Development Board for Care Coordination needs to work with the QUERI groups and bridge the research and the service delivery communities to push the implementation of research into practice.	care is the best way to define quality for a chronically ill and functionally impaired population (the evidence base for most guideline recommendations generally comes from independent, community-dwelling populations without multiple co-morbidities. There are few "off the shelf" models here, and the typical QUERI or implementation construct will not serve well.	Presentation to NLB of proposed model October 2004 High
3. Define the role of the Research and Development Board for Care Coordination?	Is this a group of the “great and the good” or active participants looking at new and innovative ways that research can be brought into practice? Critical issues are ones such as what is evidence? What about new areas like action research and when randomized studies are not appropriate/feasible?	Research and Development Board for Care Coordination OCC should: 1. Seek input from stakeholders 2. Define R&D strategy 3. Agree prioritized RFP’s 4. Monitor progress and outcomes 5. Feedback 6. Be accountable 7. McArthur Foundation is a possible model	Board Development Meeting December 2004 High CCHT R&D Strategy March 2004 High